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APPENDIX C

THE SCOGGIN SITE: AN EARLY MIDDLE PERIOD BISON KILL

by

John E. Lobdell

(Continued from September, 1973 issue)

A Thesis

Submitted to the

Department of Anthropology and

the Graduate School of the University

of Wyoming in Partial Fulfillment of Requirements

for the degree of

Master of Arts

University of Wyoming

Laramie, Wyoming

April, 1973

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CHAPTER III

THE ARTIFACT ASSEMBLAGE

Stone Tools and Their Use

The sandstone chunks previously mentioned were probably used in the butchering process. They are usually found within the compound sometimes above and below bone (Fig. 8). In all likelihood they were used to chop off meat and break bone. Since their number was great, only a few were brought back to the lab for closer analysis.

All that can be concluded from laboratory analysis of these specimens is that some look suspiciously like cleavers or at least as though their shape is not a natural phenomemon (Fig. 12b-d). Some appear almost core-like. A diagnostic statement probably cannot be made as the sandstone is that variety with a carbonate cement. Any recognizable cutting edges may no longer exist because of deterioration of the stone over the specified time period (Boyd 1973).

One artifact, definitely a tool (Fig. 12a), is made of a silty shale that is probably a member of the Mesaverde Formation (Root 1973). It is an oval shaped flake 8.5 by 5.5 centimeters and 1 centimeter thick. It appears to be an unretouched flake that was possibly used to cut as is evidenced by uneven damage to a working edge and to scrape as is indicated by some edge polish. It is surprising that more of these flakes were not present, since with the local shale available, it is assumed that they could be easily made and discarded when dulled through use.

Chipped Stone Tools

The chipped stone tool assemblage is equally diasppointing. It consists of six chert flakes, only one of which shows retouching. This lone lamellar flake shows pressure retouch confined to the edge, and it is unifacial (Figs. 13a and 17d). It appears to be a hastily improvised cutting tool. The smooth polished edge indicates wear. The other flakes, two being tiny sharpening flakes discovered by fine-screening, are apparent waste flakes (Fig. 13b-d).

The absence of chipped stone tools appears to be important for several reasons. Most chipped tools may have been removed after their use in the butchering process. The excellent workmanship of chipped projectile points suggests the hypothesis that these people had excellent chipped stone knives for butchering also. This hypothesis can be tested in future excavations: f any knives are found they will in all likelihood be damaged or broken, hence, the reason for their being discarded. This is not

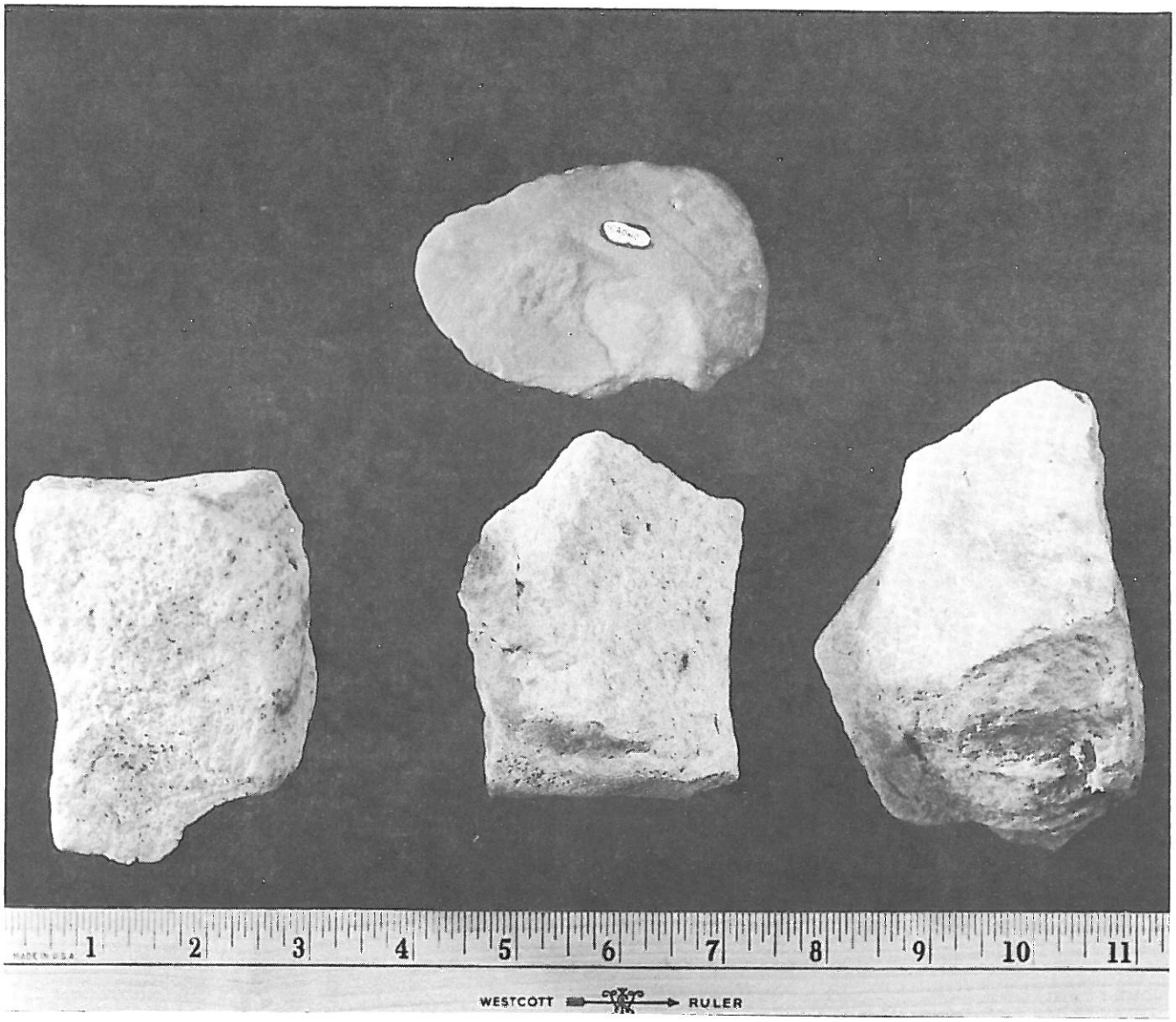


Figure 12. Butchering tools: (a) flake; (b-d) sandstone cleaners

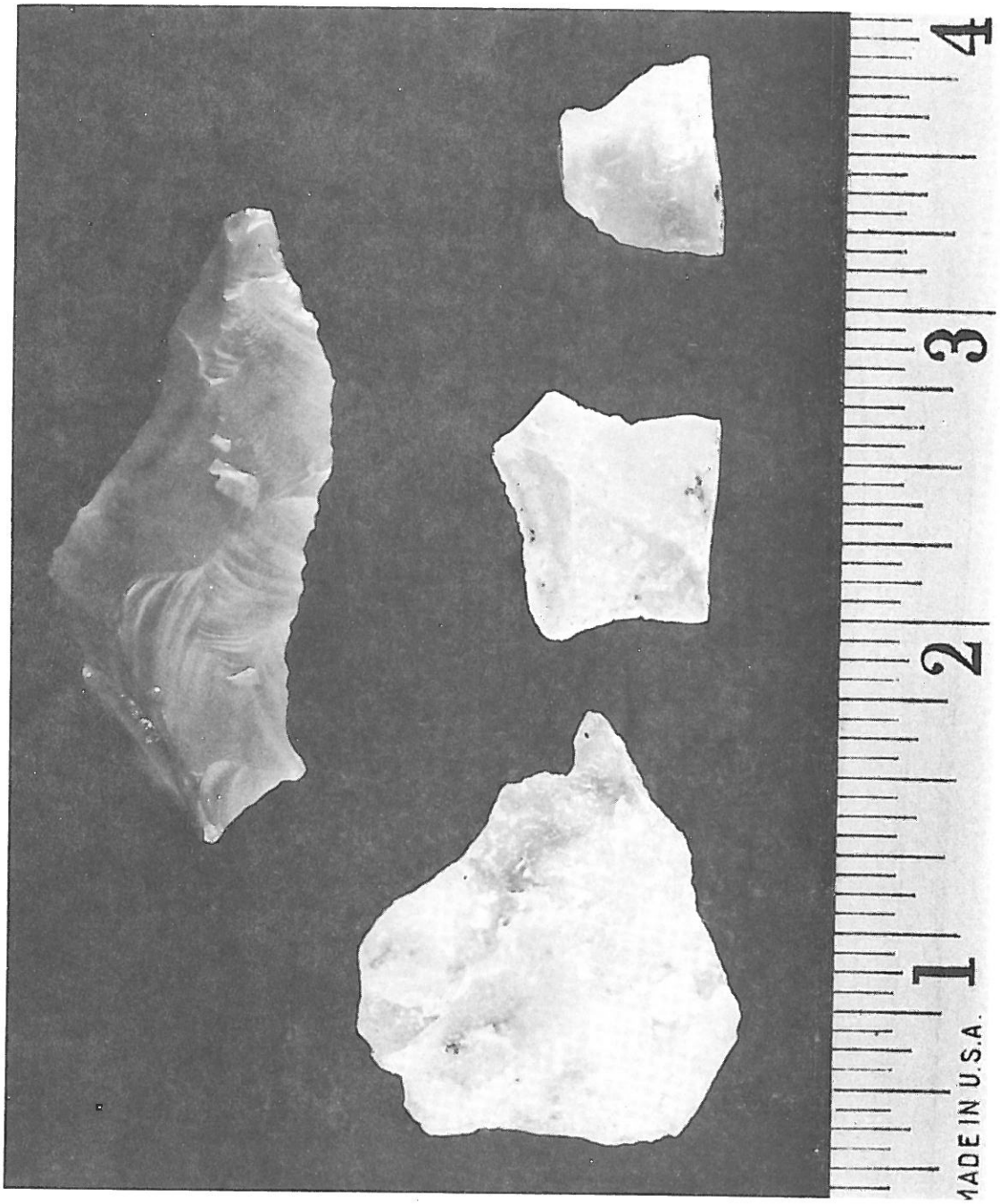


Figure 13. Flakes
(a) retouched
(b-d) waste flakes

an unknown occurrence. In many occupations of the same relative age most knives that are found are broken. Mulloy (1954) found forty-three ovoid to piriform, bilaterally flaked knives at the McKean type site. Most were broken, usually transversely across the middle.

Another idea presented (Lobdell 1972) concerns the use of other types of tools. Bone tools are cited as a viable possibility. Although hindered by poor preservation, both obvious and suspected bone tools are recognized from the trap compound.

Bone Tools

Twenty-six probable bone tools have been recovered to date. Eleven humeri have the articular surface removed and much of the interior cancellous bone missing. The resulting proximal ends have then been given a scalloped or toothed edge by breaking out pieces of bone around its entire circumference similar to some in other contexts (Frison 1972a:6). The scalloping may have been done with the sandstone chunks mentioned earlier in this chapter. These scalloped prongs show some wear polish, especially on one humerus specimen (Fig. 14).

As shown through experimentation (Frison 1972a:6), the shaped humerus is a two-purpose tool. First, it can be a skinning tool, especially on an animal lying in a prone position. The prongs grasp the hide firmly and with the distal end as a handle, the skin is pushed from the carcass clean of flesh. Secondly, these pronged humeri can serve as fleshing tools. The scalloped humeri demonstrate utility in scraping flesh from bone surfaces (Frison 1972a:6). This useage was probably feasible for the Scoggin kill, and a process that was initiated after dismemberment of the carcasses.

Five probable femur tools, two and three utilizing the proximal and distal ends respectively, are also present. All show scalloped edges, as do the humeri, and were probably used in the same manner although they may have served as choppers (Frison 1972a:5).

One badly broken pelve shows some evidence of wear and may have been used as a chopper (Frison 1972a:5). In addition, nine long bone fragments show possibilities of having been part of a bone tool. These are identified again by a scalloped effect and some wear. Most appear to be humeri, but at least one radius and one tibia are represented. These examples of bone tools (Fig. 15) are fortunate finds, because they probably represent many more tools that are no longer recognizable. It is considered likely that bone tools probably represented the majority of tools used in the butchering process, although this is only calculated speculation from the number recovered.

Figure 14. Humerus bone tool with scalloped working edge

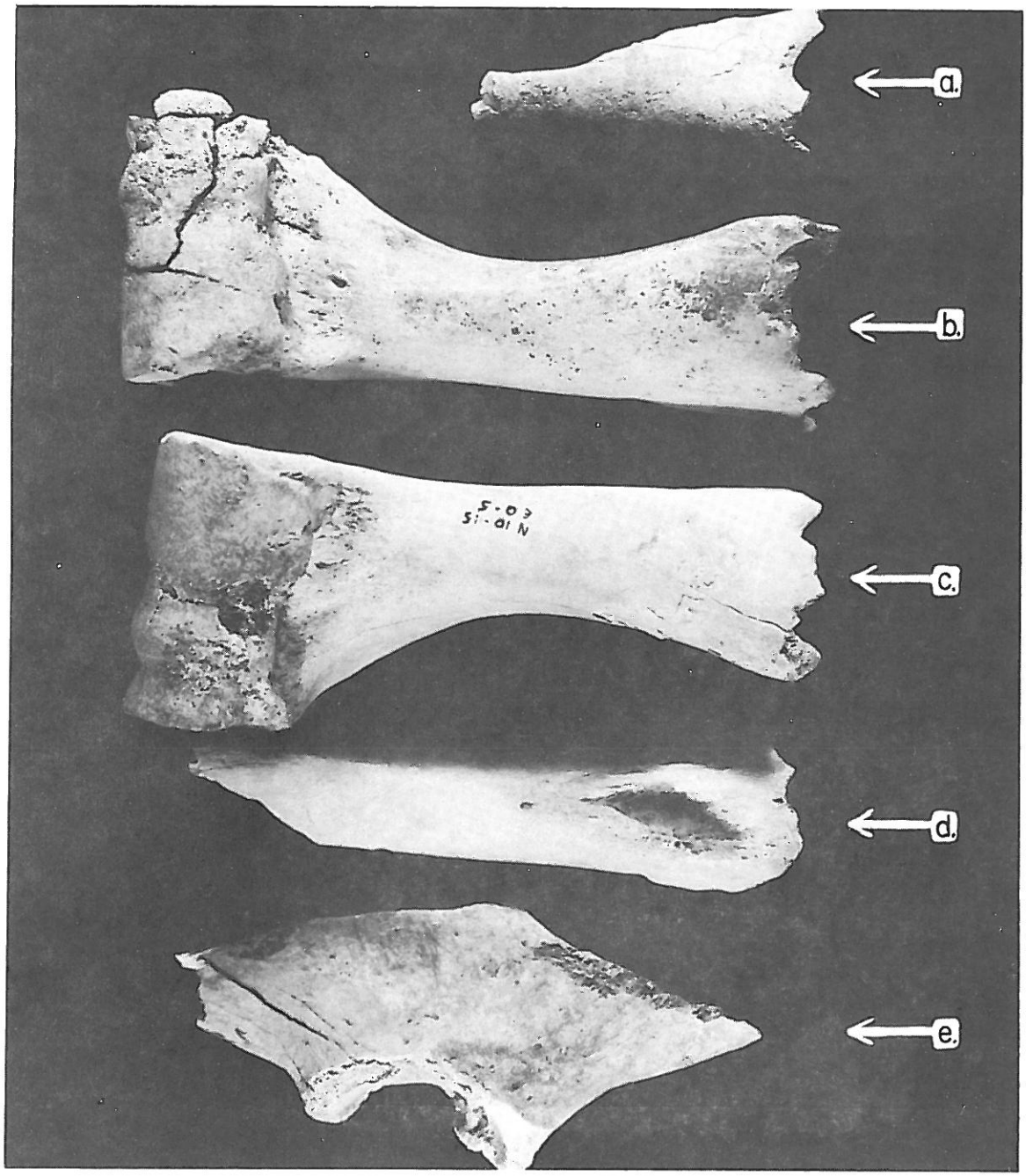


Figure 15. Bone tools
(a) fragment
(b-c) humeri
(d) femur
(e) pelve

Both the Vore Site near the Black Hills, a Late Prehistoric jump, and the Casper Bison antiquus trap, an Early Period site with apparent Hell Gap affiliations, lack a significant number of stone butchering tools. But bone tools are plentiful. Since a continuous time depth from 10,000 B.C. to Late Prehistoric times has been shown (Frison 1972a:5-6), Scoggin may well represent a synchronic Early Middle Period member of this bone tool use continuum.

Antler Hammer

One badly fragmented antler hammer has been identified (Frison 1973). This identification was on the basis of the difference in cancellous bone from antler and Bison bone. It also shows a shaped end, broken, but still showing the gloss and appearance of antler.

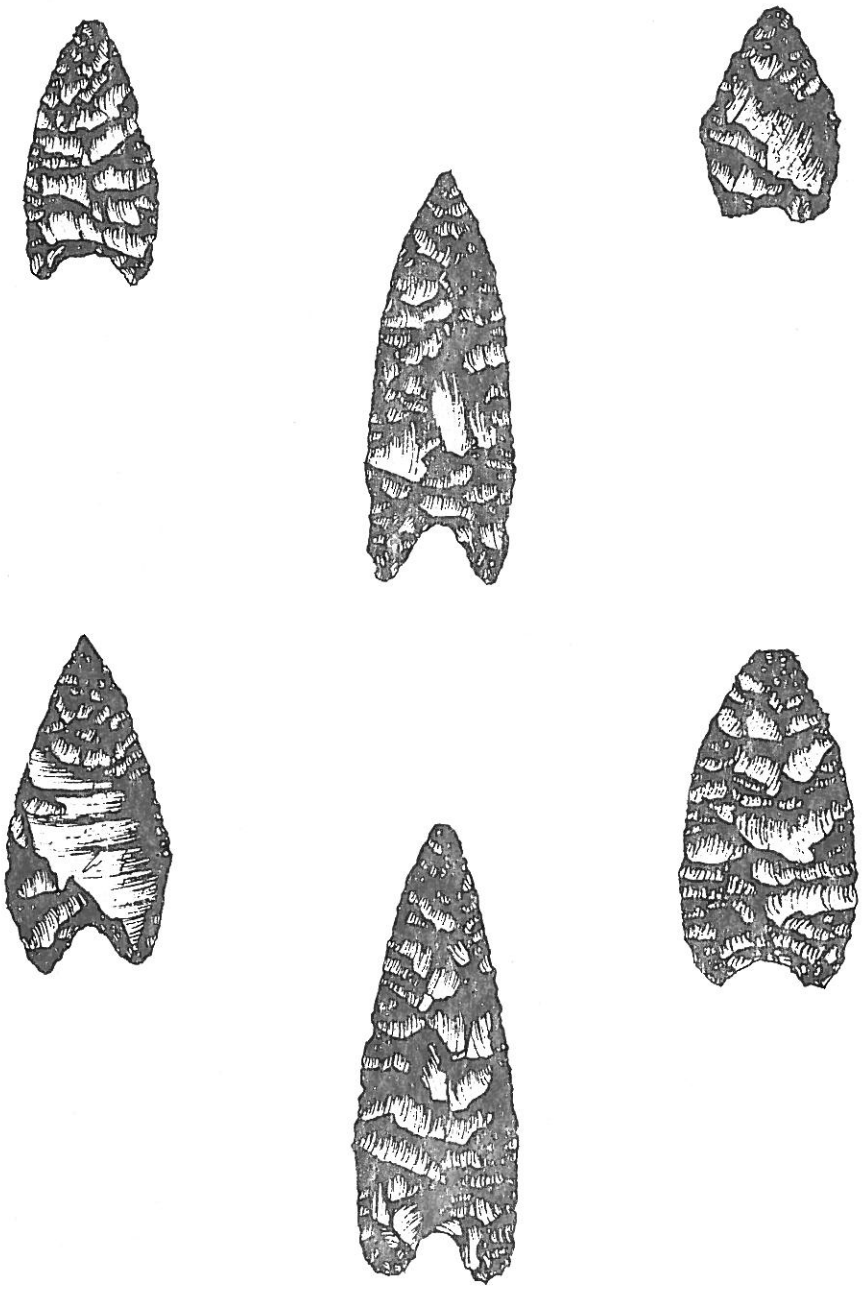
Soft antler hammers may have been used to sharpen chipped tools during the butchering process. Nevertheless, fine screen sampling produced only two small typical sharpening flakes, perhaps another indication of the extensive use of bone tools and infrequent use of chipped stone.

Projectile Points

Seventy-eight artifacts identifiable as projectile points or projectile point fragments were recovered. Of these, fifty could have at least one or more dimensions measured, and thirty-eight were diagnostic. These artifacts are in two collections. The University of Wyoming artifacts have been catalogued beginning at CA-001, etc. Material for all but two of these artifacts are cherts of varying color and consistency. The exceptions are both non-diagnostic projectile point tips of a large grained quartzite.

The majority of points are lenticular, with a few planoconvex exceptions that show pronounced original flake scars (Fig. 16a & c). In general, all are quite thin and sharp because of excellent bifacial parallel-colateral flaking. In addition, some projectile points show a solitary transverse flake scar (Fig. 17b). It is evident that this flaking was used successfully to thin down the thickest area of the point. In a few examples this carefully transverse flaking is bifacial. Transverse thinning flakes are often slightly oblique. In two cases this oblique angle is pronounced (Fig. 17b). Because of the excellent primary flaking there is no retouch except in the case of reworked points (Fig. 16c). All edges of these points are slightly convex and quite sharp. Heavy grinding or dulling of any edges of these points is a rare exception. Proximal blade edges, notches (where they occur), and basal indentations are chipped for the most part and not ground. Basal indentations are formed through longitudinal flaking.

Two distinct varieties of points are present. One is a long leaf-shaped



F.gure 16. (a-f) lanceolate points

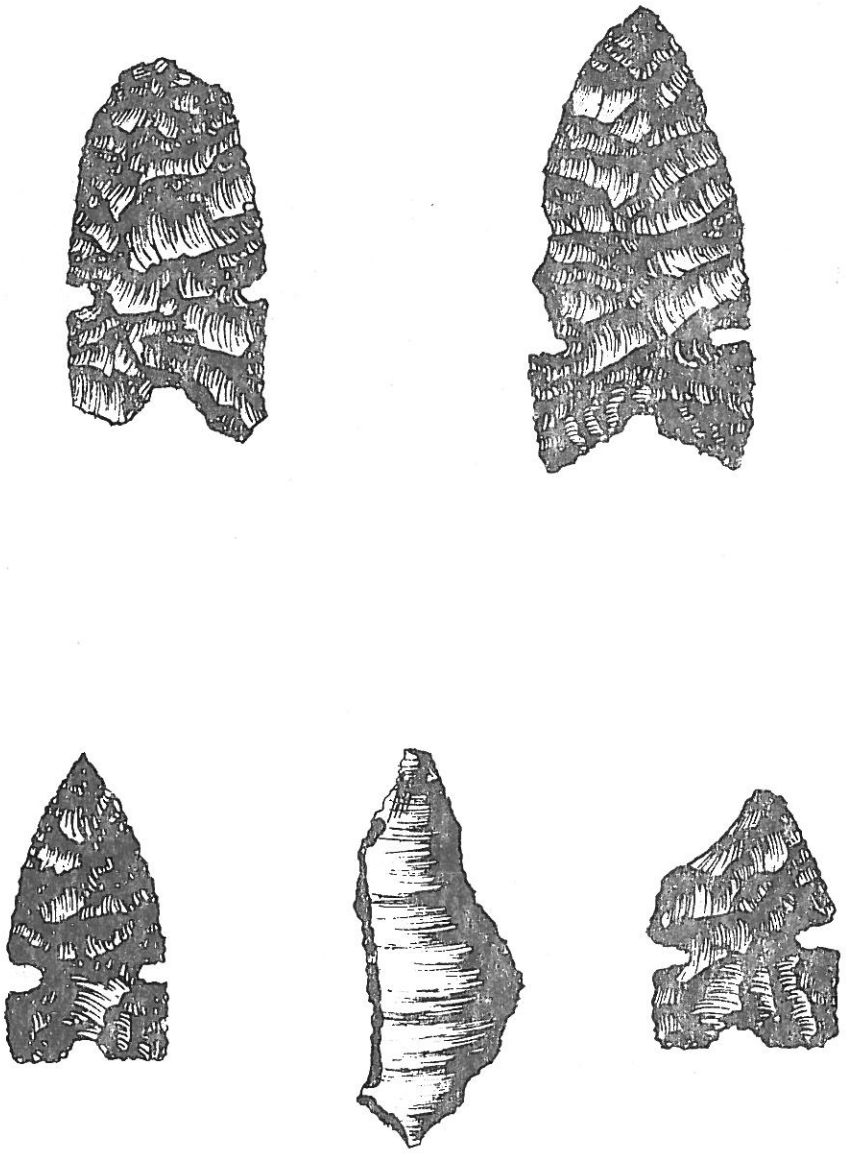


Figure 17. (a-c and e) side-notched points
(d) retouched flake

lanceolate type that has a slightly concave to deeply indented base (Figs. 16, 18, & 19). The second type has generally pronounced side notches, a straight to concave base, and may or may not have a basal notch (Figs. 17, 20, 21, & 22).

Projectile Points: Cultural Affinities of McKean and Side-Notched Points

The first variety of projectile points is diagnostic of the Early Middle Period on the Northwestern Plains (Mulloy 1958:209). It has been given the nomenclature of McKean Lanceolate Point (Wheeler 1952:39-44). Wheeler (1954:7-14) also has named types Duncan and Hanna to describe parallel-stemmed and proximally expanding-stemmed points respectively. However, Mulloy (1954) does not recognize Wheeler's above nomenclature. He instead sees any stemming of the lanceolate form as a continuous range of variation of shapes. Any noticeable variation is closely connected by intergrades (Mulloy 1954:444-445). Therefore, the term McKean should include the variants that Wheeler decided to call separate types. From the above controversy a dichotomy has developed between archeologists who want to "split" the types as Wheeler did and those who want to "lump" projectiles falling within the range of variation recognized by Mulloy (Syms 1970:123). In viewing these varieties of points, I agree with Mulloy. It cannot be denied that it is sometimes difficult to know in which category a given specimen should be placed (Wormington and Forbis 1965:29-31). Because of intergrades, the typological boundary between Duncan and McKean (and presumably Hanna) is arbitrary for questionable specimens (Syms 1970:125). Some sites, however, have produced only stemmed point components (Syms 1970:129).

There are no stemmed points from the Scoggin deposits. Some specimens have slight proximal lateral thinning which may give the impression of "stemming" (Fig. 16b); this, however, is of minimal proportions. Stemmed points have been surface collected in good quantities in areas adjacent to the site (Miller 1973). Most of these are also indented base and appear to be part of the range of variation of Early Middle Period projectile points (Fig. 23).

Both lanceolate and stemmed varieties are well documented for the Northwestern Plains. Sites have been reported from Alberta, Manitoba, Saskatchewan, Montana, North and South Dakota, Idaho, Utah, Nebraska, and Colorado as well as Wyoming (Syms 1970:125). Nevertheless, it is the second distinct projectile point variety from the Scoggin Site that is of particular interest here. The deeply side-notched points are poorly reported in the context of this McKean complex of points. Until now only a small percentage of these side-notched points turned up in any Early Middle Period site (Steege and Welch 1961). Side-notching from this time period is considered rare and certainly not the technological rule. However, side-notching is not rare at all when one considers again the continuous range of

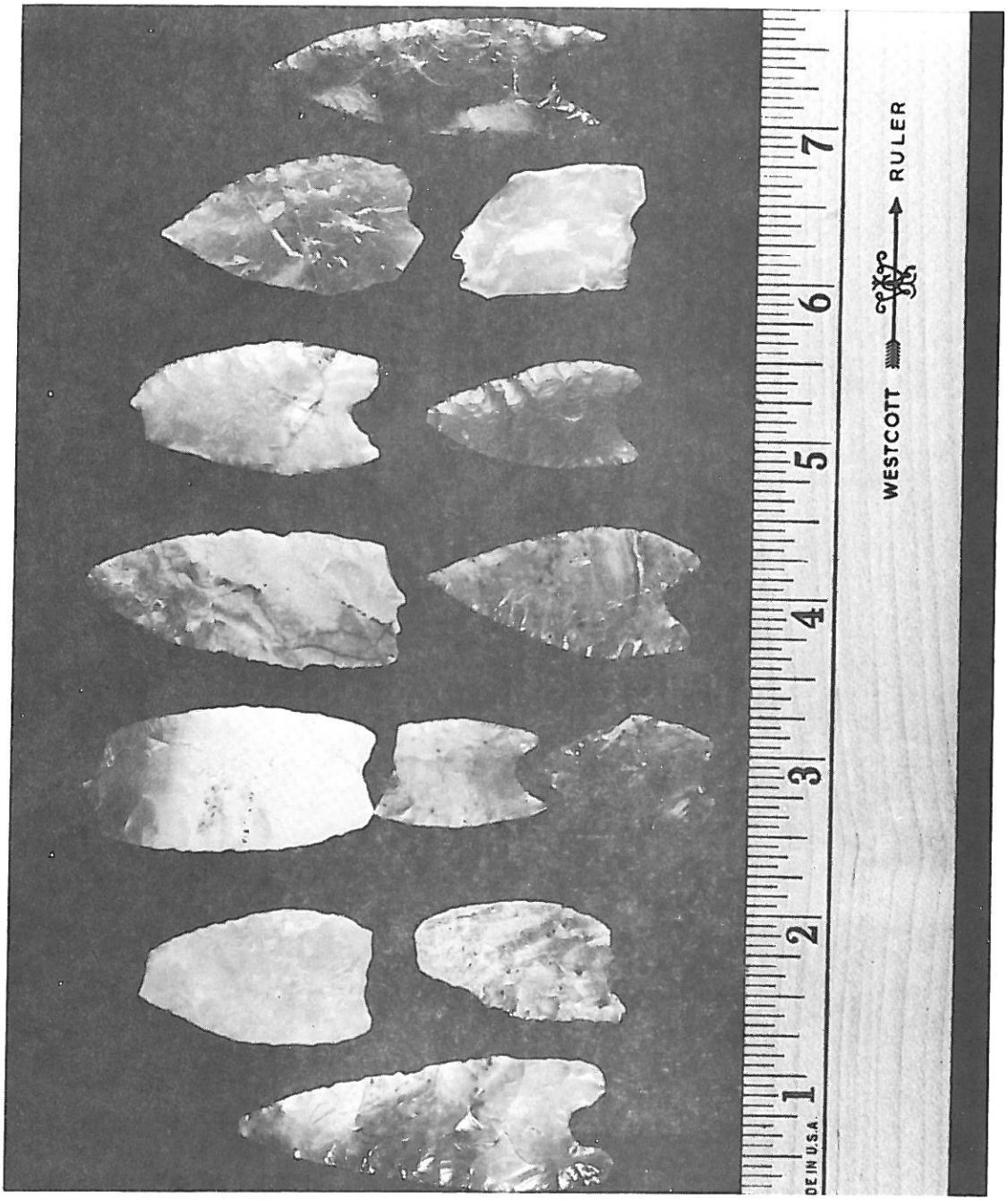


Figure 18. Lanceolate points from University of Wyoming collection

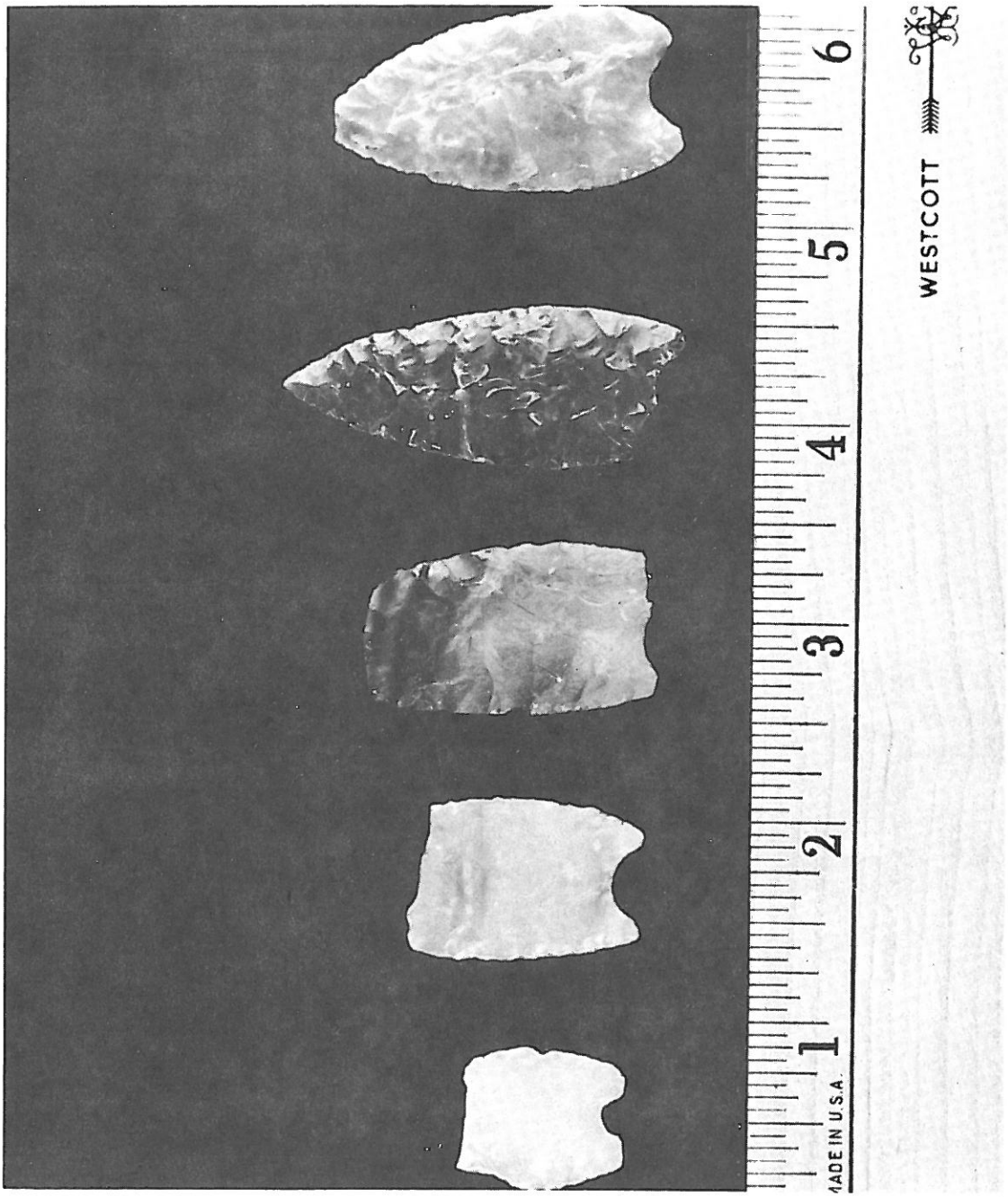


Figure 19. Lanceolate points from William E. Scoggin collection

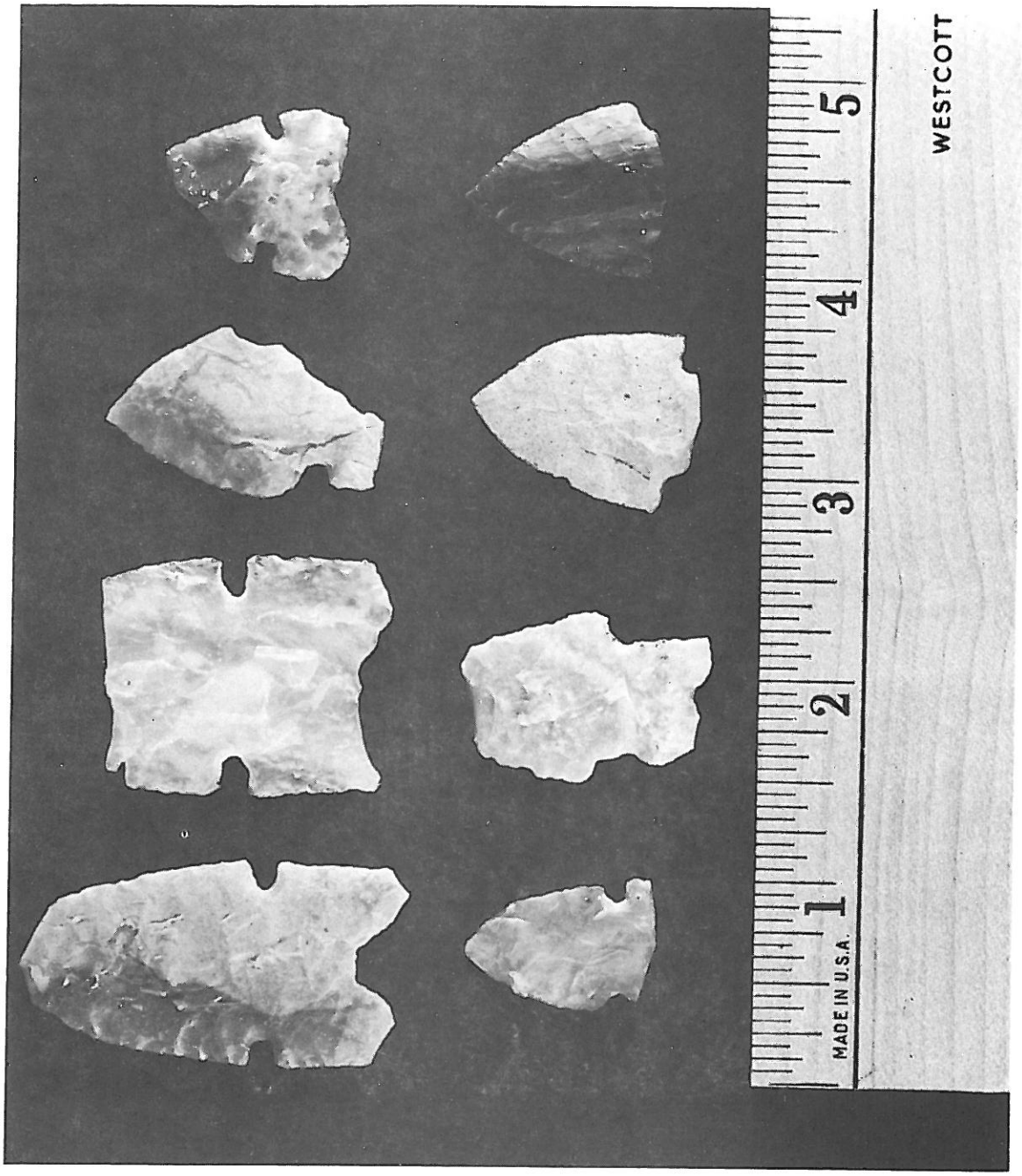


Figure 20. Side-notched points from University of Wyoming collection

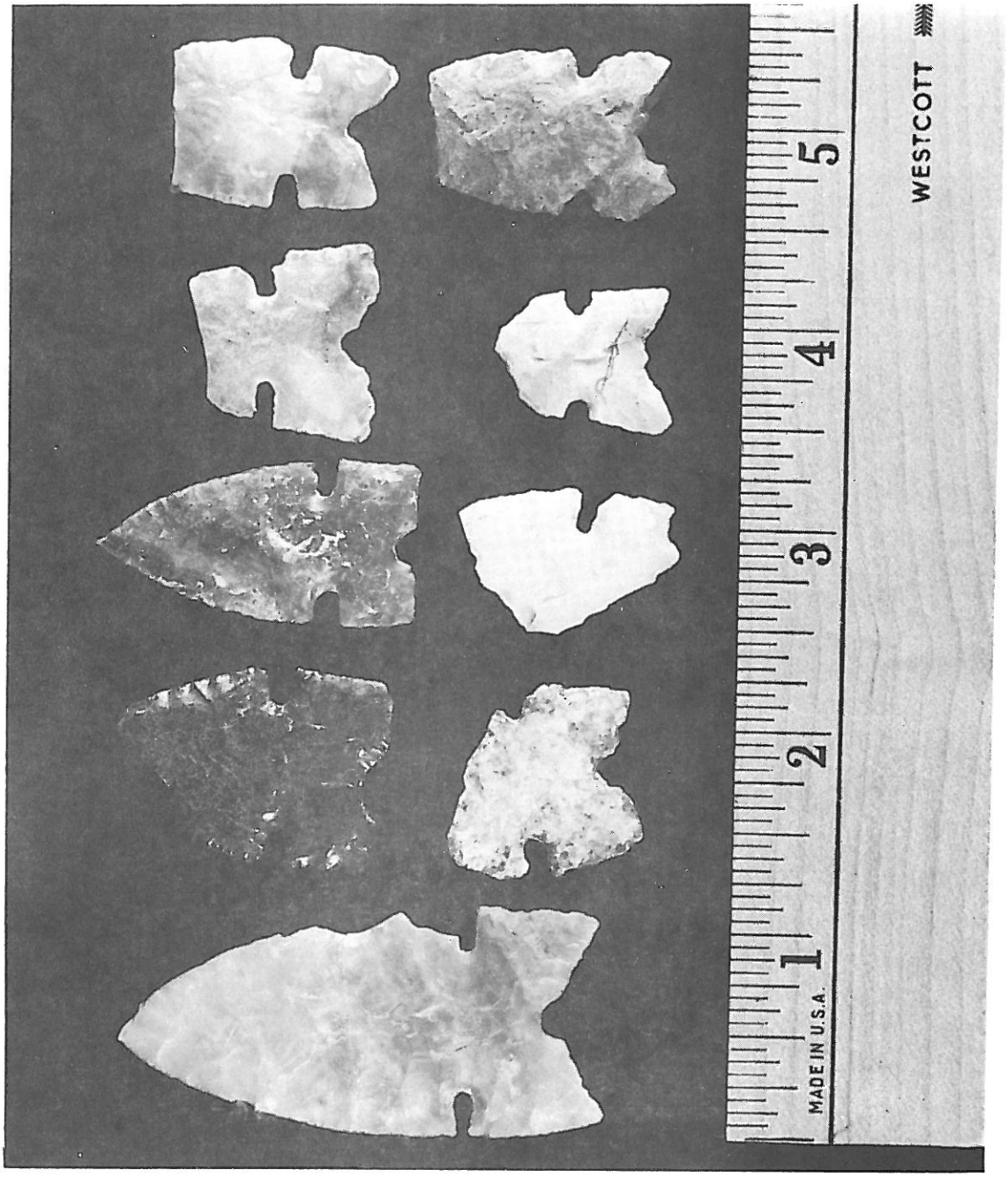


Figure 21. Side-notched points from William E. Scoggin collection

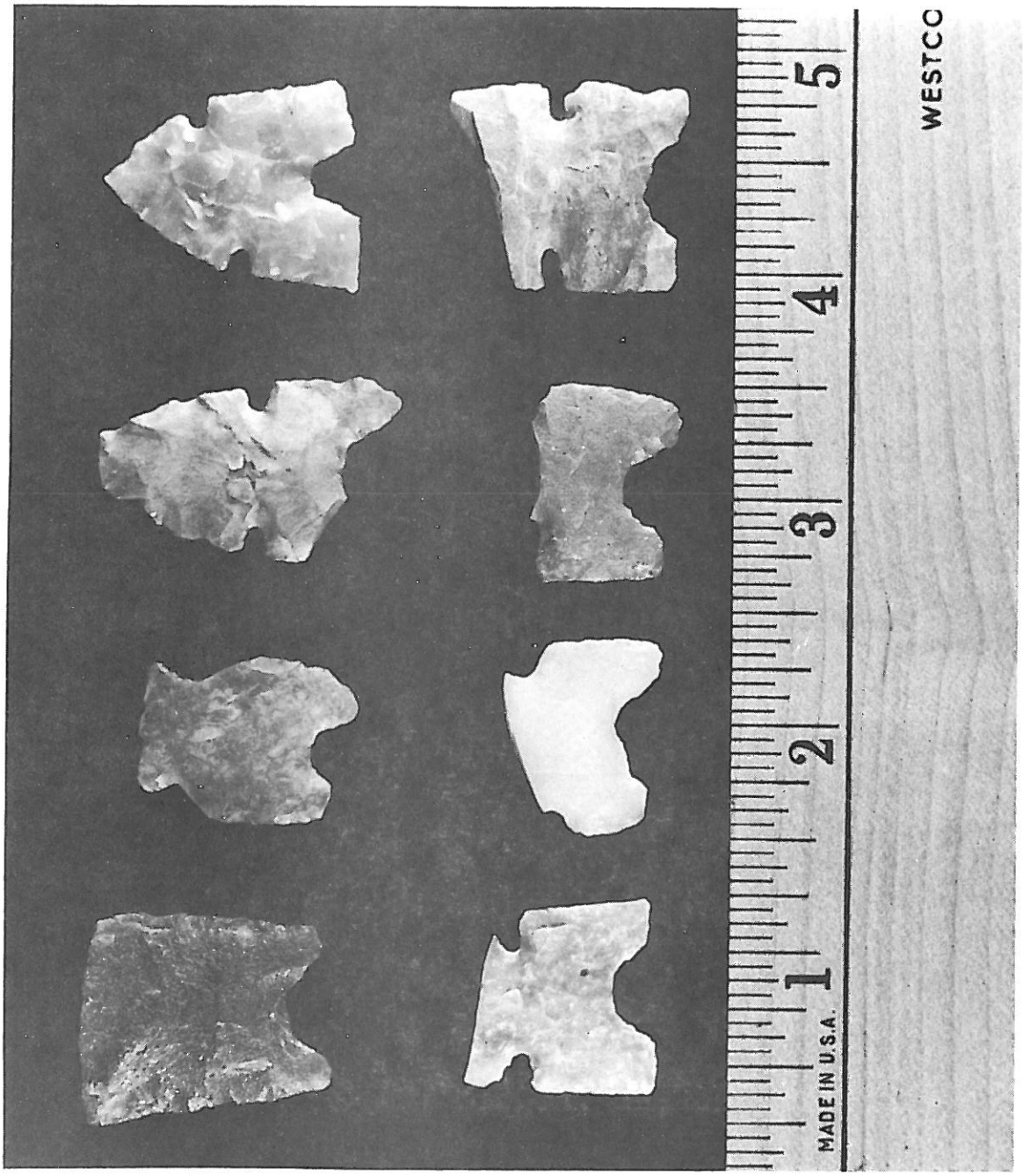


Figure 22. Side-notched points from Miller surface collection

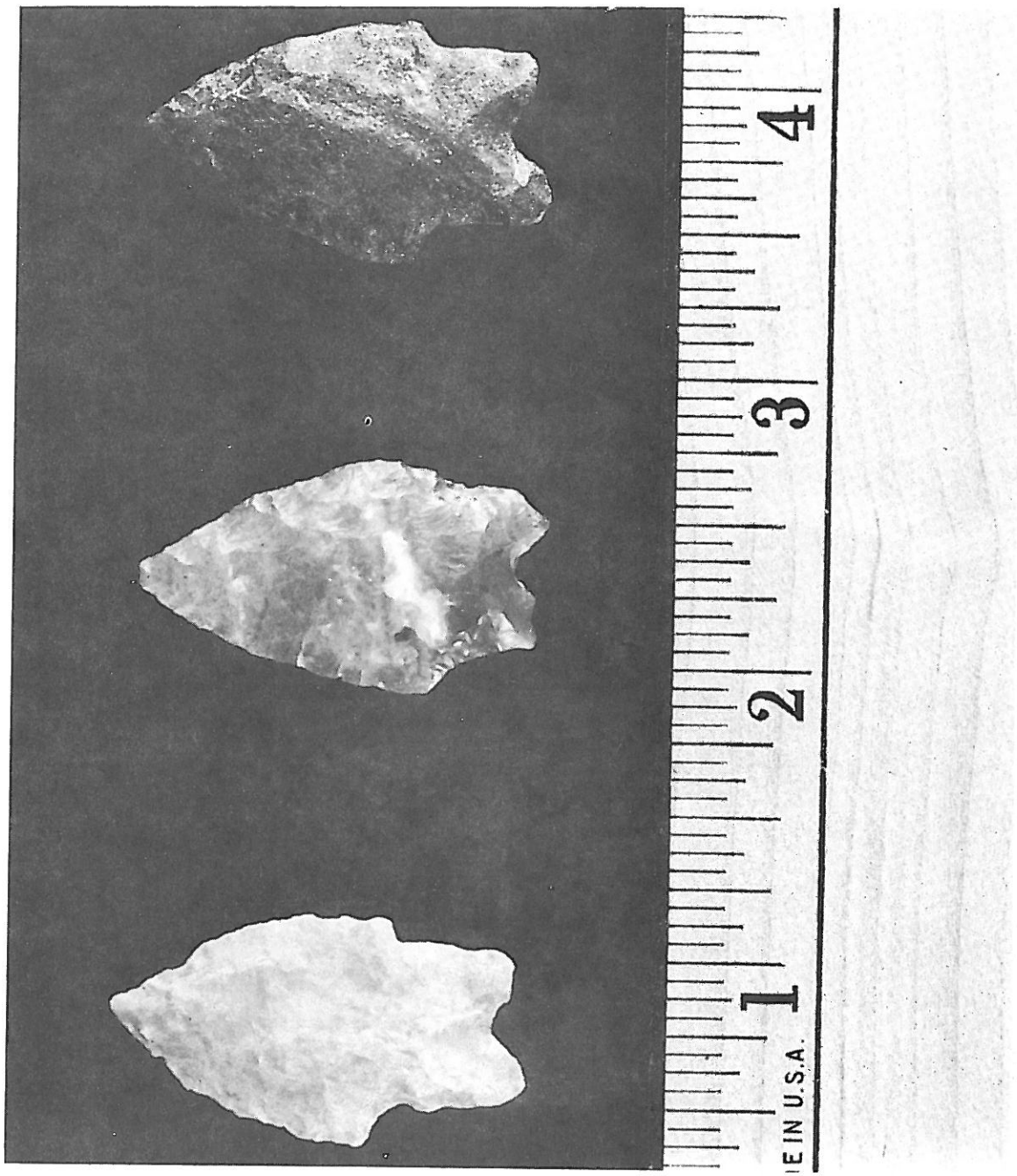


Figure 23. Stemmed points from the Miller surface collection

variation that this author feels is applicable in this analysis. Just as there are degrees of "stemness" (Syms 1969, quoted in Syms 1970:125) there appear to be degrees of "notchness." Broad, shallow side-notched, concave base points are reported from southeastern Saskatchewan at the Oxbow Dam Site (Nero and Mc Corquodale 1958:82-90) with 5200±130 B.P. (S-44) cited as the date. The above projectiles were dubbed Oxbow Type and reported from the nearby Long Creek Site as well. Two levels at Long Creek represent "Oxbow Culture" with respective dates 4620±150 B.P. (S-50) for level seven and 4620±80 B.P. (S-52), 4650±150 B.P. (S-53) for level eight (Wettlaufer and Mayer-Oakes 1960:56-59). It appears that, however, Oxbow may be a separate earlier projectile point type as evident from the early date of 4955±165 B.P. (S-619) reported at the Gray Burial Site in Saskatchewan (Miller et al. 1972). "Parkdale Eared" is yet another term for a like projectile point of the same relative age. MacNeish (1958:94-100) reports this type from the Larter Site in southeastern Manitoba and estimates age at 2000 to 3000 years B.P. A few points from Leigh Cave, Wyoming, have this notched appearance and are associated with lanceolate and stemmed varieties. The date is set at 2220± 150 B.C. Excellent preservation of normally perishable materials shows the cave occupation to be more reminiscent of a desert culture orientation than that of Plains Indian hunters (Frison and Huseas 1968:22-32). Some early type points from the Lower Yellowstone country that are of undefined cultural associations (Mulloy and Lewis 1943:298-299) also may be comparable examples. Projectile points from the Powers-Yonkee trap in Montana are noted to be a basic design resembling very closely the McKean point. Lanceolate and stemmed points are present in small quantities. The radio-carbon date is 4450±125 B.P. (I-410) (Bentzen 1962:116-118). Forty miles to the southwest near Sheridan, Wyoming, side-notched and lanceolate points identical in size, shape, and material to those recovered from Powers-Yonkee have been associated with a date of 2600±200 B.P. (I-644) and 2460±140 B.P. (RL-160). These dates suggest a considerable time span of 2000 years for this notched point (Bentzen 1966:27-39) as is evident from the above dated excavations.

At several stratified sites this shallow open side-notching is manifested at Archaic levels. Steward (1937:94-106) reports this from Cave No. 2 at Promontory Point, Utah, where shallow side-notched are mixed with lanceolate types. Other Great Basin sites yielded side-notched points with comparable lanceolates (Smith 1941:21-23). At the Mortlach Site in central Saskatchewan several "cultures" are defined that include side-notched points (Wettlaufer 1955:36-52). Level II at the Kobold kill site in southern Montana has low lateral side-notched points like those at the Powers-Yonkee Site (Frison 1970a:12-29). Lissolo Cave, Wyoming, includes as yet undated points that show stylistic and technological similarities, although found at higher levels from McKean lanceolate bearing stratum (Steege and Paulley 1964:26-30).

Although associated with McKean types at Mummy Cave in northwestern Wyoming, side-notched points also occur at even older levels (Wedel, Husted, and

Moss 1968:185). Levels below McKean at Mummy Cave, although anachronous, may indicate some stylistic hints as to where and when these side-notched varieties might have originated. Shallow open side-notched points at levels 15 through 20 resemble specimens from the Eastern Plains. Logan Creek type points (Kivett 1958: 337) from eastern Nebraska are thought to be represented at the above Mummy Cave levels (Wedel, Husted, and Moss 1968:184). Logan Creek points are much earlier and have been associated with Bison bison occidentalis at the Simonsen Site in northwestern Iowa (Agogino and Frankforter 1960:414-415) and in northern Minnesota the Itasca Site (Shay 1971:39-40). Early eastern-looking side-notched points have recently been taken from a kill site west of the Black Hills (Frison 1972b) and may be a link in bridging the gap from the Rocky Mountains to the Eastern Plains. Logan Creek is much earlier than McKean and not a part of the Early Middle Period at all. Whether or not these early side-notched points started a stylistic progression that continued up into McKean times is only speculation. While this hypothesis is untestable at this time, it nevertheless remains a possibility.

It is the later point types representative of the Early Middle Period that fit into Mulloy's (1954) range of variation. At the McKean Site itself this range is manifested from lanceolate, through degrees of stemmed, and into a very few side-notched points at the oldest level (Mulloy 1954:445-446). Scoggin Site points show degrees of notching, from low lateral shallow round notches to acutely deep indentations. It is these deep side-notched points that are even less documented.

Deep side-notched points from McKean age sites have intrigued archeologists for a number of years because they appear abruptly in horizons much earlier than expected (Forbis, Strong, and Kirby:80). Stylistically they may closely resemble Late Prehistoric Points (Fig. 17c). As a rule, they exceed the later points in all dimensions (Forbis, Strong, and Kirby:80). Although in small proportions to the reported artifact assemblages, these deep side-notched points have been documented from several sites.

Early documentation comes in small quantities from the lowest level at Signal Butte, Nebraska, in association with lanceolate, stemmed, and shallow side-notched points. It is suggested that deep side-notched varieties may represent an early and larger prototype of the small notched points of later times (Strong 1935:233 and Plate 25). Unfortunately, there is a long discontinuity between these two time periods. Later analysis of these Signal Butte side-notched points prompted the name "Mallory" (Forbis, Strong, and Kirby:80), a term that was picked to suggest association with McKean (Forbis 1973). Three dates taken later from Signal Butte, Ia., the level of "Mallory" points, are 3445±120 (L-104A), 3400±150 (L-385C) taken from bone), and 4550±220 B.P. (L-385B). These appear close to the date from the Scoggin Site. "Jackass Ear" is another name used to describe these points, the

locale being the Sweem-Taylor shelter in central Wyoming (Wyoming Archaeologist 1959:3-6). "Un-named Variant" (Steege and Welch 1961) is the term now substituted for "Jackass Ear" in an attempt at referring to possible McKean affinities. Steege and Welch (1961) relate this point to Signal Butte I and estimate age at about 3200 B.P. An open, unstratified site (48-SW-303) near Oregon Buttes in south central Wyoming has many point types represented including lanceolate and stemmed points suggested to be of Early Middle Period age. Large, deep side-notched points are also associated but have been reported as contemporaneous with Late Period points (Adams and Mack 1970:19-27). After studying the Oregon Buttes collection I feel that these larger points are not late and should be comparable in age to the lanceolate and stemmed forms found.

Site reports also indicate these deep side-notched points to be included in Archaic traditions of the Great Basin. Jennings (1968:137-140) reports these in association with generalized "Desert Culture" from Danger Cave in Utah. Hells Midden at Dinosaur National Monument in northwestern Colorado has stylistically similar points from levels just below those containing stemmed, indented-base points that have been affiliated with Pinto Basin (Lister 1951:15-48) but are perhaps more reminiscent of McKean variations. Both viewpoints are conjectural as no dates are present. Lastly, the Pine Spring Occupation 2 levels in southwestern Wyoming yielded "Duncan" forms in association with side-notched projectile points (Sharrock 1966:56) that are nearly identical to those from the Scoggin kill. Sharrock (1966) notes that these seem to correspond with forms from Signal Butte I. The Pine Spring deep side-notched points are more finely made and, except for size, resemble later type points (Sharrock 1966:56). As mentioned before, this is a good description of the points from the Scoggin Site.

In recapitulation, cultural relations based on stylistics or typological analysis are often subject to speculation. Nevertheless this author feels that the suggested affinities offered by the literature to date support the following hypothetical affirmations:

1. Side-notched Early Middle Period points can be included in the hypothesis of a continuous range of variation called McKean (Mulloy 1954:445).

2. Side-notched points of Archaic age are representative of both desert archaic and big-game hunting life styles.

3. Side-notched points are as representative of Archaic sites in northern Great Basin and Northwestern Plains as the other McKean variations. (The origin, however, may never be known.)

4. Much older shallow side-notched points (such as Logan Creek and Mummy Cave) may be stylistically related to the later McKean side-notched variations. Oxbow types may represent a slightly earlier separate point type from McKean but possible affinities should not be ruled out at this time.

5. At this time the discontinuity between the very similar appearing Early Middle Period and Late Prehistoric Period side-notched points remains unexplained.

CHAPTER IV

PROJECTILE POINT ANALYSIS

Theoretical Considerations

It has been said that any classification is superior to chaos and even a classification at the level of sensible properties is a step towards rational ordering (Levi-Strauss 1966:15). Typological classifications can thus be useful, because they make use of the sensible properties of projectile points. Typological projectile point classifications provide the researcher with an orderly base from which to initiate comparisons. Furthermore, these comparisons can be used to begin the attempt at recognition of cultural affinities (as suggested by the writer for Early Middle Period projectile points in the preceeding chapter).

As with many theories and methods, some problems exist with typological classifications of artifacts. Firstly, the person doing the classifying may be a "lumper" or a "splitter" (Rouse 1960:192), a problem explored previously in regards to the McKean sequence. There is quite a bit of personal decision necessary in determining projectile point types. Generally speaking, no two persons will impose exactly the same typological classification on a given artifact collection. Secondly, the chipping of stone is a subtractive process as opposed to an additive process used in pottery making. It seems more humanly possible to create two exactly alike pottery vessels than it does two chipped stone artifacts. For this reason taxonomic classifications have, perhaps, been more successful in analyzing Southwest pottery. Thirdly, projectile points are often the only artifacts recovered that can act as determining agents of the culture. That projectile points are all that is available to represent an ancient culture is an unfortunate limitation. Cultural products, such as artifacts, mentifacts, or socifacts are the material of cultural development; they are not the efficient causes or active agents (Bidney 1953:33) as typological analysis may imply. Instead, it is the use or function of an artifact, its contribution to cultural life in a given social context, which is significant--not the artifact itself (Bidney 1953:27).

Analytical methods have also been employed in regard to projectile point types. They too have certain limitations. Such analyses are most valid when used within given boundaries. They may not necessarily be valid in comparing artifact assemblages from different sites because age, material, and cultural variables may trigger inconclusive results. Some sites, however, warrant an analytic attempt. For example, the Scoggin Site yielded two very different projectile points from a single component, and this component defines the borders of the study. Age, material, or cultural variables are in all likelihood not uncontrollable at the Scoggin Site.

Although both typological and analytical methods have drawbacks, different individual site circumstances may require one or both methods to be employed. In summation, both typologic and analytic classifying methods can be useful tools of the archeologist when used cautiously and in the appropriate contexts.

Analytic Method Employed for the Scoggin Site

Projectile Points

It was decided to take advantage of the unique Scoggin opportunity to study two very unlike points from the one bone layer and thought that by comparing real components of the different points valuable differences or similarities could be discovered. Instead of deciding as to presence or absence of minute attributes it was decided to base the comparison on measurements, a technique developed from other works (Ahler 1971:2136) because they represent absolute characteristics.

To simplify the procedure, measurements were set up on two axes: x represents the horizontal and y the vertical axis. The points were oriented with the original flake scar down. In cases where the scar was not discernible other criteria were used to make this decision such as flatest side, slight concavity, etc. In a very few cases this decision was still difficult to initiate, and these were noted during the measuring process. The specific locations for measurements taken are (Fig. 24):

1. x = thickness
   y = length
3. x = (always 0)
   y = depth of basal indentation
3a. x = width of basal notch
   y = depth of basal notch
4. x = width of basal contact
   y = (always 0)
5. x = width of notch at proximal point
   y = height of notch at proximal point
6. x = width of notch at proximal medial point
   y = height of notch at proximal medial point
7. x = width of notch at distal medial point
   y = height of notch at distal medial point
8. x = width of notch at distal point
   y = height of notch at distal point
   (On unnotched point 8 is width and height at widest blade point.)
9. x = width of midway point from base to tip
   y = height of midway point from base to tip
10. x = width at maximum point of proximal lateral thinning
    y = height at maximum point of proximal lateral thinning

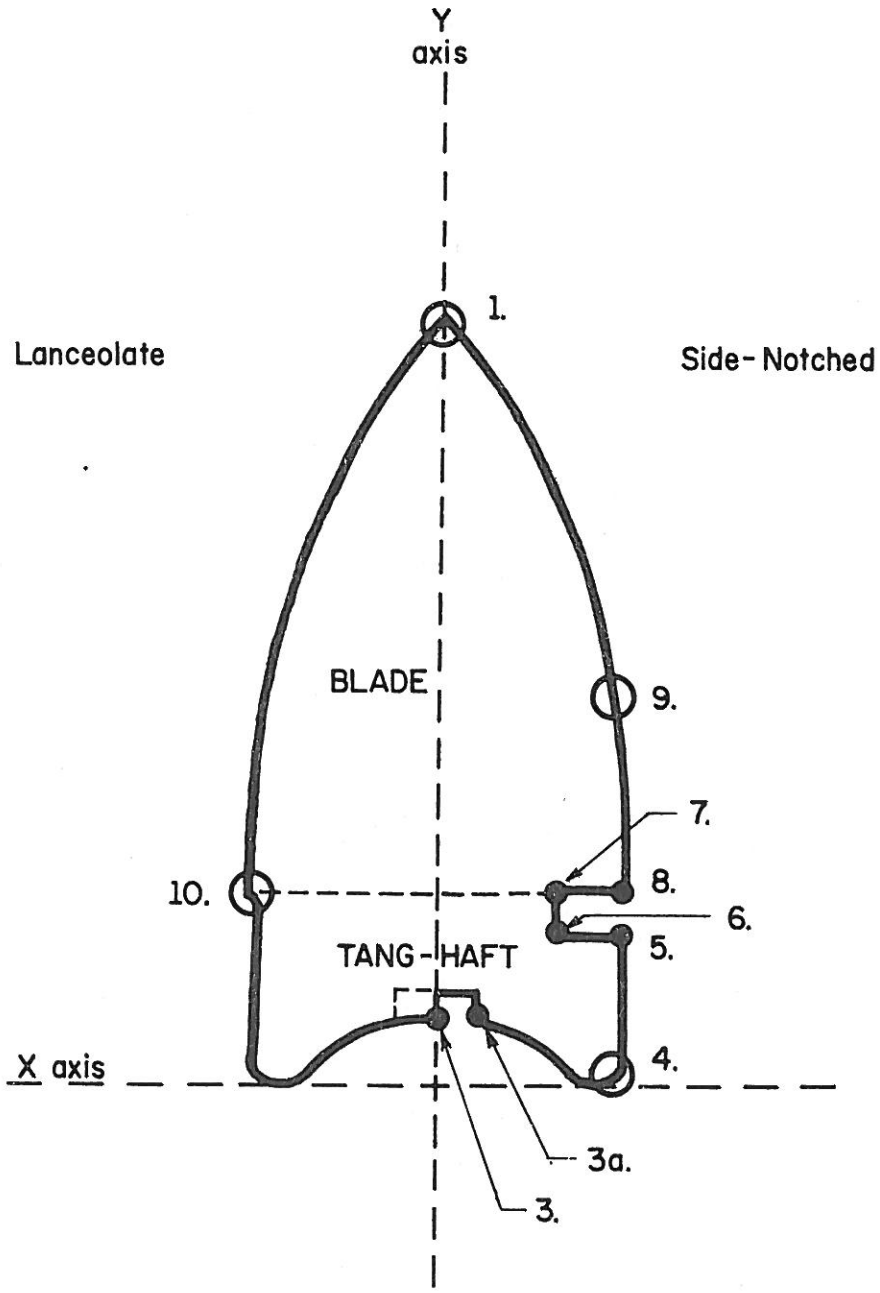


FIGURE 24. Location of Measurements (After J. Durkee 1973)

Some measurement nomenclature and criteria were taken from Ahler (1971) and Binford (1963).

In the cases where the tip of the projectile point was not present, length was estimated on the assumption of bilateral symmetry. In cases where one lateral portion was missing the same assumption was used where possible. Briefly, all or a good part of the base and tang was necessary to make the above assumption.

The above measuring effort not only led to a reliable componential analysis in theory; it also forced close firsthand practical observation of each individual projectile point. Originally only nine x-y measurements were determined. However, measurement led to the addition of a category for proximal lateral thinning on unnotched points, an attribute not readily noticeable until the points were closely examined and measured.

Some applicable non-diagnostic blade fragments were measured for maximum width and thickness only. For data retrieval it was then necessary to divide points into lanceolate, side-notched, and non-diagnostic but measurable fragments; hence, type 1, 2, or 3. Because of the abrupt difference of side-notching from lanceolate the division of the sample into types did not seem so speculative as to be invalid.

For control of the data it was decided to use Statistical Package for the Social Sciences (SPSS) format (Durkee 1973). The statistical results (Appendix) were then graphed to determine clusters in the measurements and, therefore, gross differences. The range of each characteristic was determined through standard deviation values. Because of the numerically small sample only one standard deviation was used in each case. One standard deviation value represents 68.26% or approximately seven-tenths of the sample showing a given characteristic. It was hypothesized that the above statistical programs would shed light on the separation of types and functions.

Data Analysis

In order to prove or disprove the relationship of these two point types, hypotheses were set up as a basis for directed study:

1. Distribution of the points in situ was not significant. The plotting of projectile points (Fig. 4) offered no recognizable pattern of distribution. Position relationships were random.

2. There appeared to be differences in thickness (lx) and length (ly) between the two types. Graphing the measurements, however, disproved any differences. Not only was there ample overlap, but even the means were very close (Table 6).

3. It was thought that basal contact width was significant. Here a comparison of the two types showed two distinct clusters with no overlap (Table 6). If notch measurements could compensate for this discontinuity, then shaft size was relatively constant.

Interior notch widths (6x and 7x) were significant and overlapped with lanceolate basal contact width (Durkee 1973). Means are close to that of 4x from lanceolate points. Therefore, the above compensation is proven and support is given to a hypothesis that the shaft at the hafting point was the same relative size for both points.

The above evidence appears to be very significant. It was thought that the two points might represent specialized killing tools; lanceolate points hafted for small atl-atl darts and side-notched for large thrusting spears. Based on the above measurement comparison such an idea now seems unlikely.

Except for the above measurements, the rest were plotted on one rudimentary graph and the expected was found; the means for all other attributes are close and the standard deviations overlap (Appendix). These results suggest that these two apparent points are in reality only one type with side-notching used for either functional hafting strength or stylistic preference. According to measurements, these two points are basically the same.

The question arises why the points should differ stylistically. (Syms (1969, quoted in Syms 1970:137) suggested that there may be some correlation between the McKean Lanceolate, Duncan and Hanna types and three interacting but identifiable ethnic groups. He also feels that if "Oxbow" types are included in McKean, then four ethnic groups would have to be considered (Syms 1970:137). This situation may well have occurred at the Scoggin kill with the consolidation of more than one microband for the sole purpose of a communal hunt in the fall of the year. Two separate microbands may be represented by the two styles of projectile points.

The large deep side-notched points have a lateral hafting advantage over the lanceolate varieties. These points could be a highly specialized point used in the killing of Bison by these people. Other occupation sites of similar age have produced like points found in limited quantities only. At the Scoggin kill, however, side-notched points make up 52.63% of the projectile point assemblage. Other Early Middle Period kill sites have shown an even higher percentage of side-notched points although these show low lateral notching (Bentzen 1962, 1966)(Frison 1970a). Since lanceolate varieties have occurred at these other sites, then perhaps the side-notched hafting advantage was desirable for dispatching very large game as it has good lateral strength with a maximum of blade edge exposed.

The evidence reviewed suggests that the large side-notched points from

TABLE 6

GRAPHED MEASUREMENTS SHOWING OVERLAP OR DISCONTINUITY

Measurement	Type	UNITS 0 10 20 30 40 50 60
1x	1	
	2	
	3	
1y	1	
	2	

(The following times 2 for clarity)

4x	1	
	2	
6x	2	
7x	2	

the Scoggin Site and elsewhere of the same time period are another variation and not a distinct point from the McKean variations. From statistical comparisons of measurements the projectile point assemblage appears quite homogeneous (Durkee 1973). Side-notched points may be utilitarian in hafting superiority for killing large game such as Bison or could possibly represent a second cultural group's seasonal consolidation with makers of the lanceolate variety for communal hunting. Whatever the ultimate answer, the evidence suggests that the deep side-notched point is very much a part of the Early Middle Period on the High Plains and to some extent the comparable time period in the northern Great Basin. It is not a manifestation to be recognized for only Late Prehistoric or Proto-Historic time periods.

CHAPTER V

SUMMATIONS, CONCLUSIONS, AND RECOMMENDATIONS

The Scoggin Site is representative of Bison procurement activities during the Early Middle Period, which seem little different from earlier or later periods. The environmental, geological and typographical features played an important role during this carefully conceived fall of the year kill. Site features appear generalized for this specific kill and are found elsewhere on the Northwestern Plains. Unfortunately, inferences that can be drawn from the poorly preserved bone material are disappointing.

The single component, however, affords optimum opportunity to study the two distinct types of projectile points in one context. Through the comparison of measurements this essay has reached the conclusion that the two "types" are only one. This conclusion, in addition to the reporting of the site, constitutes the major contribution in the essay.

The preliminary report and ideas presented here should offer potential direction for future excavations and work at the Scoggin Site. Considering the evidence presented, new hypotheses can be initiated and field tested in the tradition of science. In reporting and analyzing parts of the site, the writer has intended to prepare the way for such future work.

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APPENDIX

TABLE 7

PROJECTILE POINT STATISTICS
(IN MILLIMETERS)

	Measurement	Min.	Max.	Mean	Std. Dev.	Mode
Type 1 Lanceolate	1x	3.0	5.1	3.9167	.6205	4.2
	1y	29.0	60.0	44.8823	8.4031	5.4
	3y	2.0	8.0	4.1222	1.5991	3.0
	4x	11.4	18.0	14.8882	1.8751	14.9
	8x	17.6	24.0	20.7529	2.0446	22.0
	8y	11.0	22.0	15.8235	2.8115	17.0
	9x	15.9	22.8	19.2900	2.0000	20.6
	9y	14.0	30.0	22.1800	4.2900	27.0
	10x	15.9	23.0	18.9769	2.2039	19.0
	10y	6.0	16.0	9.9230	3.3780	8.0
Type 2 Side-Notched	1x	3.0	5.8	3.7789	.6241	4.0
	1y	26.0	70.0	43.0714	12.1496	40.0
	3y	3.0	8.0	4.6250	1.5972	5.0
	3a x	3.5	8.0	5.5000	1.9821	4.0
	3a y	2.0	3.0	2.7500	.4629	3.0
	4x	17.3	28.4	21.9083	3.5349	20.0
	5x	16.0	30.3	21.7077	4.6268	22.0
	5y	6.0	20.0	12.3929	3.7064	10.0
	6x	10.9	20.9	14.9333	3.1742	12.0
	6y	6.5	20.1	12.6400	3.4560	10.0
	7x	11.0	21.0	15.0789	2.8834	14.0
	7y	9.0	22.5	14.9667	3.5075	13.0
	8x	16.0	29.1	21.7789	3.9543	16.0
	8y	9.2	23.0	15.4733	3.3617	14.0
	9x	15.5	26.5	20.4000	3.3300	20.0
	9y	13.0	35.0	21.4300	6.1200	20.0
Type 3 Non-Diagnostic	1x	2.9	4.8	3.9778	.5608	4.3
	8x	17.0	23.4	21.0333	1.9900	21.0